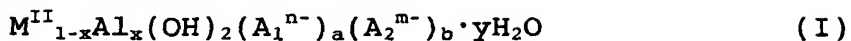


## CLAIMS

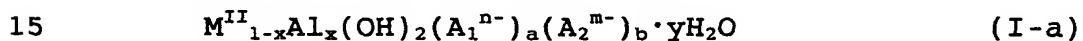
1. A dye fixing agent for water-color ink to be contained in the water-color ink accepting layer of an ink jet recording medium having a water-color ink accepting layer formed on a substrate, which is a hydrotalcite compound containing a silicic acid anion and a sulfuric acid ion, or a silicic acid anion as an anion(s).
2. The dye fixing agent for water-color ink according to claim 1, wherein the hydrotalcite compound contains a silicic acid anion and a sulfuric acid ion, or a silicic acid anion in an amount of 10 to 98 mol% based on the total of all the anions.
3. The dye fixing agent for water-color ink according to claim 1, wherein the hydrotalcite compound contains a silicic acid anion and a sulfuric acid ion, or a silicic acid anion in an amount of 20 to 98 mol% based on the total of all the anions.
4. The dye fixing agent for water-color ink according to claim 1, wherein the hydrotalcite compound contains a silicic acid anion and a sulfuric acid ion in an amount of 10 to 98 mol% based on the total of all the anions and a silicic acid ion in an amount of 5 to 100 mol% based on the total of the silicic acid anion and the sulfuric acid ion.
5. The dye fixing agent for water-color ink according to claim 1, wherein the hydrotalcite compound has an average particle diameter of 0.1 to 10  $\mu$ m.
6. The dye fixing agent for water-color ink according to claim 1, wherein the hydrotalcite compound is represented

by the following formula (I):



wherein  $M^{II}$  is  $Mg^{2+}$  or/and  $Zn^{2+}$ ,  $A_1^{n-}$  is a silicic acid anion having a valence of  $n$  and a sulfuric acid ion ( $SO_4^{2-}$ ), or a  
 5 silicic acid anion having a valence of  $n$ , with the proviso that the silicic acid anion having a valence of  $n$  is an anion selected from the group consisting of  $SiO_3^{2-}$ ,  $HSiO_3^-$ ,  $Si_2O_5^{2-}$  and  $HSi_2O_5^-$ ,  $A_2^{m-}$  is an anion selected from the group consisting of  $CO_3^{2-}$ ,  $NO_3^-$ ,  $Cl^-$  and  $OH^-$ ,  $x$  and  $y$  satisfy  $0.15 < x \leq 0.80$   
 10 and  $0 < y < 2$ , and  $a$  and  $b$  satisfy  $0.15 < na + mb \leq 0.80$ .

7. The dye fixing agent for water-color ink according to claim 1, wherein the hydrotalcite compound is represented by the following formula (I-a):



wherein  $M^{II}$  is  $Mg^{2+}$  or/and  $Zn^{2+}$ ,  $A_1^{n-}$  is a silicic acid anion having a valence of  $n$  and a sulfuric acid ion ( $SO_4^{2-}$ ), or a  
 silicic acid anion having a valence of  $n$ , with the proviso that the silicic acid anion having a valence of  $n$  is an anion  
 20 selected from the group consisting of  $SiO_3^{2-}$ ,  $HSiO_3^-$ ,  $Si_2O_5^{2-}$  and  $HSi_2O_5^-$ ,  $A_2^{m-}$  is an anion selected from the group consisting of  $CO_3^{2-}$ ,  $NO_3^-$ ,  $Cl^-$  and  $OH^-$ ,  $x$  and  $y$  satisfy  $0.50 < x \leq 0.80$  and  $0 < y < 2$ , and  $a$  and  $b$  satisfy  $0.50 < na + mb \leq 0.80$ .

25 8. The dye fixing agent for water-color ink according to claim 7, wherein in the above formula (I-a), the silicic acid anion and the sulfuric acid ion, or the silicic acid anion accounts for 10 to 98 mol% of the total of all the anion ( $A_1^{n-} + A_2^{m-}$ ).

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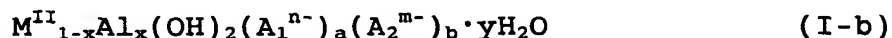
9. The dye fixing agent for water-color ink according to claim 7, wherein the hydrotalcite compound has a BET specific surface area of 50 to 400  $m^2/g$ .

10. The dye fixing agent for water-color ink according to claim 7, wherein the hydrotalcite compound has a total pore volume (N<sub>2</sub> gas adsorption method) of 0.50 to 2.00 ml/g.

5 11. The dye fixing agent for water-color ink according to claim 7, wherein the hydrotalcite compound has an average pore radius (N<sub>2</sub> gas adsorption method) of 4 to 15 nm.

12. The dye fixing agent for water-color ink according to claim 7, wherein the hydrotalcite compound has an average particle diameter of 0.1 to 10 μm.

13. The dye fixing agent for water-color ink according to claim 1, wherein the hydrotalcite compound is represented by the following general formula (I-b):



wherein M<sup>II</sup> is Mg<sup>2+</sup> or/and Zn<sup>2+</sup>, A<sub>1</sub><sup>n-</sup> is a silicic acid anion having a valence of n and a sulfuric acid ion (SO<sub>4</sub><sup>2-</sup>), or a silicic acid anion having a valence of n, with the proviso that the silicic acid anion having a valence of n is an anion selected from the group consisting of SiO<sub>3</sub><sup>2-</sup>, HSiO<sub>3</sub><sup>-</sup>, Si<sub>2</sub>O<sub>5</sub><sup>2-</sup> and HSi<sub>2</sub>O<sub>5</sub><sup>-</sup>, A<sub>2</sub><sup>m-</sup> is an anion selected from the group consisting of CO<sub>3</sub><sup>2-</sup>, NO<sub>3</sub><sup>-</sup>, Cl<sup>-</sup> and OH<sup>-</sup>, x and y satisfy 0.15 < x ≤ 0.50 and 0 < y < 2, and a and b satisfy 0.15 < na + mb ≤ 0.50.

14. The dye fixing agent for water-color ink according to claim 13, wherein the hydrotalcite compound has an average particle diameter of 0.1 to 10 μm.

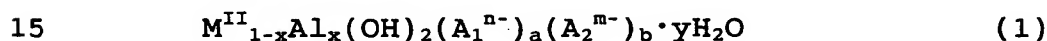
15. An ink jet recording medium having an water-color ink accepting layer formed on a substrate, wherein a dye fixing agent contained in the water-color ink accepting layer is the dye fixing agent of claim 1.

16. The ink jet recording medium according to claim 15, wherein the dye fixing agent is the dye fixing agent of claim 6.

5 17. The ink jet recording medium according to claim 15, wherein the dye fixing agent is the dye fixing agent of claim 7.

18. The ink jet recording medium according to claim 15, 10 wherein the dye fixing agent is the dye fixing agent of claim 13.

19. A porous hydrotalcite compound represented by the following formula (1):



wherein  $M^{II}$  is  $Mg^{2+}$  or/and  $Zn^{2+}$ ,  $A_1^{n-}$  is a silicic acid anion having a valence of  $n$  and a sulfuric acid ion ( $SO_4^{2-}$ ), or a silicic acid anion having a valence of  $n$ ,  $A_2^{m-}$  is an anion selected from the group consisting of  $CO_3^{2-}$ ,  $NO_3^-$ ,  $Cl^-$  and  $OH^-$ , 20  $x$  and  $y$  satisfy  $0.50 < x \leq 0.80$  and  $0 < y < 2$ , and  $a$  and  $b$  satisfy  $0.50 < na + mb \leq 0.80$ .

20. The porous hydrotalcite compound according to claim 19, wherein the silicic acid anion having a valence of  $n$  is an 25 anion selected from the group consisting of  $SiO_3^{2-}$ ,  $HSiO_3^-$ ,  $Si_2O_5^{2-}$  and  $HSi_2O_5^-$ .

21. The porous hydrotalcite compound according to claim 19, wherein the silicic acid anion and the sulfuric acid ion, 30 or the silicic acid anion ( $A_1^{n-}$ ) accounts for 10 to 98 mol% of the total of all the anions ( $A_1^{n-} + A_2^{m-}$ ).

22. The porous hydrotalcite compound according to claim 19 which has a BET specific surface area of 50 to 400  $m^2/g$ .

23. The porous hydrotalcite compound according to claim 19 which has a total pore volume ( $N_2$  gas adsorption method) of 0.50 to 2.00 ml/g.

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24. The porous hydrotalcite compound according to claim 19 which has an average pore radius ( $N_2$  gas adsorption method) of 4 to 15 nm.

10 25. The porous hydrotalcite compound according to claim 19 which has an average particle diameter of 0.1 to 10  $\mu m$ .

26. Use of the hydrotalcite compound of claim 19 as a dye fixing agent contained in the water-color ink accepting layer  
15 of an ink jet recording medium.